

Use this checklist to install and test the Routermate T1 CSU. For reference and additional information, see [Routermate T1 CSU Installation and Operation \(918-6168\)](#). If you have any questions during installation, contact Osicom Technologies' Customer Service at (800) 359-2273.

Line Configured

When ordering a T-1 line, specify to the carrier how you want the line configured.

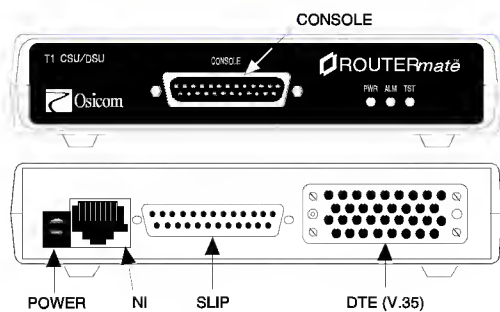
If ordering a fractional T-1 line, you must also specify the number of DS0s. The number of DS0s is determined by the Data Rate you select for the DTE interface.

If clear channel operation is desired, request B8ZS. Clear channel operation occurs when a Nx64 multiple Data Rate is selected. B8ZS guarantees that the ones density requirement on the T-1 line will be met.

After the line is ordered, the carrier should inform the customer of the framing format of the line (D4 or ESF) and if B8ZS is supported. If the line is a fractional T-1 line, the carrier must also specify which DS0s are used.

Hardware Configured

A wall-mount transformer and NI cable are included with the unit. Obtain the console and SLIP cables from your terminal and router vendor. See [Installation Checklist](#) in the manual ([Chapter 2](#)).



Interface Locations

- After configuring the software (see below) connect the **NI cable** (DCA95411) from the Routermate's NI connector to the RJ48C Telco jack.
- After configuring the software (see below) connect a **V.35 cable** from the Routermate's V.35 connector to the V.35 interface on your DTE equipment (router or terminal server).

Software Configured

- Using the ASCII terminal, press **[CTRL-N]** to display the Routermate Terminal Selection screen.
- Select the correct terminal type from the list of available types.
- Press **[CR]** (the default password) to display the Main Menu.
- Access the System Configuration Menu.
 - Set the Timing option to *Repeater*.
 - Set the NI Format and NI Coding to *Auto Detect*. This causes the Routermate T-1 to automatically configure itself to match the framing format and coding used on the line.

NOTE

At least one end of the T-1 link should be set for D4 or ESF, otherwise the *Auto Detect* feature may not be able to synchronize.

The detected framing format and coding is displayed in parenthesis (B8ZS is not displayed until the B8ZS pattern is detected).

See [System Configuration Menu](#) in the manual ([Chapter 3](#)) for additional information.

- Access the Channel Configuration Menu.
 - Set the Clocking option to *Int Rxc - Int Txc*.
 - Select the desired Data Rate of the DTE interface.

The Data Rate parameter provides 24 rates at multiples of 56 kbps and 24 rates at multiples of 64 kbps. As each Data Rate is displayed on the menu, the screen shows the number of required DS0s to support that speed.

- Connect the wall-mount transformer (550-0366-01) then plug into a grounded AC power receptacle.
- Attach an ASCII terminal to the CONSOLE interface using a straight-through RS-232 cable. The ASCII terminal is used for initial software configuration, and can also be used to manage the Routermate.
- Turn on the terminal and configure the terminal for:

Rate: 9600 bps	Stop bits: 1
Mode: full duplex	Parity: none
Character: 8 bits	Flow control: DC1/DC3 (Xon/Xoff)

(OVER)

Selecting a multiple of 56 kbps positions user data in seven of the eight bits of every allocated DS0. The eighth bit is forced to a one in each allocated DS0 guaranteeing one's density on the T-1 line. A Nx56 Data Rate is typically selected when the line does not support B8ZS.

Selecting a multiple of 64 kbps positions user data in all eight bits of every allocated DS0. This allows clear channel operation but it does not guarantee one's density. A Nx64 Data Rate is typically selected when the line supports B8ZS.

See [Channel Configuration Menu](#) in the manual ([Chapter 3](#)) for additional information.

6. Access the Bandwidth Allocation Menu and allocate the number of DS0s required to support the selected Data Rate to Channel 1. Any DS0s that do not need to be allocated to Channel 1 should be set to Not Used. When the correct number of DS0s are allocated, the Bandwidth Status line at the bottom of the menu will indicate that the bandwidth is allocated correctly.

If the line is a fractional T-1 line, then the DS0s allocated must match the DS0s provisioned for your line by the carrier.

See [Bandwidth Allocation](#) in the manual ([Chapter 3](#)) for additional information.

NOTE

The system timing and channel clocking parameters instructed above will work in most applications; however, applications such as tail circuit or limited distance line driver will require different settings. See [Chapter 3](#) in the manual for additional information.

Unit Tested

After all the cables are connected and you have completed the initial software configuration, the Routermate should be able to communicate with the T-1 network. Verify this at the System Diagnostics menu, as described below.

1. At the Main Menu, select System Diagnostics.
2. At the System Diagnostics screen, check the status of the following alarms. All alarm fields should indicate *No*.

Rx Red Alarm - A Red Alarm condition exists when there is a loss of signal or the incoming signal is out of frame for at least 2.5 seconds. In the Red Alarm state, a Yellow Alarm signal is transmitted toward the source of the Red Alarm until the Red Alarm no longer exists. This is usually caused by a poor connection to the Telco jack, or by a bad line. Verify that the correct NI cable is installed and it is securely connected at each end.

Rx Blue Alarm - A Blue Alarm condition exists when an unframed All Ones signal is received.

Rx Yellow Alarm - A Yellow Alarm indicates the equipment at the opposite end of the line from the interface receiving the yellow alarm is out-of-frame or out-of-sync on its receive pair (in Red Alarm).

If any of these Alarm fields indicate *Yes*, perform a Local NI Loop test to verify the correct operation of the Routermate.

When the Local NI Loop test is set, all of the Alarm fields should indicate *No*. If any of them continue to indicate *Yes* after the Local NI Loop is set, this indicates a problem with the unit.

If all the Alarm fields indicate *No* when the Local NI Loop test is set, but they indicate *Yes* when the test is cleared, this indicates a network problem.

Management Configured

If SNMP or Telnet are used to manage the Routermate, access the Management Menu and configure the following parameters:

- **Internet Address** - Before SNMP or Telnet management can be used, assign an Internet Protocol (IP) Address to the Routermate.
- **Access via telnet** - Before Telnet management can be used, set this option to *Enabled*.
- **Community Strings** - Before SNMP management can be used, configure the community strings to match the strings used by the SNMP management station.

See [SLIP Management](#) in the manual, [Chapter 2](#) and [Management Menu, Chapter 3](#) for additional information.